

Package ‘AutoregressionMDE’

September 14, 2015

Title Minimum Distance Estimation in Autoregressive Model

Version 1.0

Description Consider autoregressive model of order p where the distribution function of innovation is unknown, but innovations are independent and symmetrically distributed. The package contains a function named ARMDE which takes X (vector of n observations) and p (order of the model) as input argument and returns minimum distance estimator of the parameters in the model.

Depends R ($\geq 3.2.2$)

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LazyData true

NeedsCompilation no

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ARMDE *Performs minimum distance estimation in autoregressive model*

Description

Performs minimum distance estimation in autoregressive model

Usage

ARMDE(X , AR_Order)

Arguments

X : vector of n observed value
AR_Order : order of the autoregressive model

Value

returns minimum distance estimators of the parameter in the autoregressive model

References

- [1] Koul, H. L (1985). Minimum distance estimation in linear regression with unknown error distributions. *Statist. Probab. Lett.*, 3 1-8.
- [2] Koul, H. L (1986). Minimum distance estimation and goodness-of-fit tests in first-order autoregression. *Ann. Statist.*, 14 1194-1213.
- [3] Koul, H. L (2002). *Weighted empirical process in nonlinear dynamic models*. Springer, Berlin, Vol. 166

See Also

LRMDE

Examples

```
X <- rnorm(10, mean=0, sd=1)
AR_Order <- 2
rhat<-ARMDE(X,AR_Order)
```

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